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## [12] Utility Model Patent Specification

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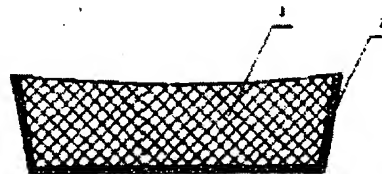
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### [54] Title of the Utility Model

Composite Multicolor Flocked Sole

### [57] Abstract

The present utility model relates to a surface-processed sole. It is characterized by: a flocked layer (2) that is placed on the outer surface or partial side surface of a sole base material (1) using techniques including flocking technology. It is also possible to print a colored decorative pattern before or after flocking to form a composite multicolor flocked sole. It has characteristics of beauty of external appearance, comfort to the foot, wear resistance, anti-slipping, aging resistance, durability in washing, color-fastness, etc. When combined with corresponding upper sides, it is possible to manufacture all kinds of shoes, sandals, slippers, etc.



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## Claims

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1. A composite multicolor flocked sole, characterized by: on the outer surface or partial side surface of a sole base material (1), there is a flocked layer (2).

2. The sole described in claim 1, wherein: between the side surface of said sole base material (1) and the flocked layer (2), there is a color ink layer (3), and the flocked layer (2) is a transparent flocked layer.

3. The sole described in claim 1, wherein: on the flocked layer (2) on said sole side surface, there is a color ink layer (4).

4. The sole described in claim 1 or 2, wherein: on the flocked layer (2) on said sole side surface, there is partially a single-layer or multiple-layer re-flocked layer (5).

5. The sole described in claim 3, wherein: on the color ink layer (4) on said sole side surface, there is partially a single-layer or multiple-layer re-flocked layer (5).

## Explanations

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### Composite Multicolor Flocked Sole

The present utility model relates to a surface-processed sole.

Today, surface processing of soles domestically and abroad is generally performed using chemical ink spraying. However, chemical ink is hazardous to the human body and pollutes the environment. Soles that are subjected to chemical ink spraying have disadvantages such as the tendency to fade, tendency to burn, surface roughness, etc.

The purpose of the present utility model is to overcome the above disadvantages of soles and to provide a sole in which the surface is nontoxic, does not fade, does not tend to burn, and is resistant to aging.

The purpose of the present utility model is realized by using techniques including flocking technology to place a flocked layer on the outer surface or partial side surface of a sole base material. The flocked layer can be of various colors or multicolor.

With the present utility model, it is possible to place a flocked layer on the outer surface of a sole after first subjecting to printing and coloring such as silk screening, thermal transfer printing, water transfer printing, gold stamping, spray coloring, etc. It is also possible to perform printing and coloring on the flocked layer after first flocking. It is also possible to further partially flock on top of a flocked layer on the side surface of the sole, for example patterns such as flowers and plants, animals, letters and characters, trademarks, etc. Partial additional flocking can be done on one layer or in multiple layers; in multiple layers, it can produce three-dimensional patterns. It is also possible to heat stamp various decorative patterns to enhance the sense of three-dimensionality.

The flocking technique can give improvement to soles that originally have rough outer surfaces. Composite techniques of printing, coloring, and flocking are suitable for all kinds of sole base materials, and all kinds of multicolor soles can be manufactured. With the flocked soles or soles partially flocked on the sides, together with corresponding upper sides from the shoe factory, it is possible to manufacture all kinds of shoes, sandals, slippers, etc. For slippers, it is possible to place flocked layers continuously with the upper surfaces of the soles.

The present utility model has characteristics as follows: beauty of external appearance, enhanced sense of three-dimensionality, comfort to the feet, wear resistance, anti-slipping, non-flammability of the flocked layer, aging resistance, durability in washing, color-fastness, etc.

The structure of the present utility model is further explained below with working examples together with the drawings.

Fig. 1 to Fig. 5 respectively are structural sectional views of composite multicolor flocked soles of Working Examples 1-5.

In the drawings, 1 is a sole base material, 2 is a flocked layer, 3 and 4 are printed ink layers, and 5 is a flocked layer.

Working Example 1, refer to Fig. 1: Flocking technology is used to make a flocked layer 2 on the outer surface of a shoe base material 1, and the flocked layer can be of various colors or multicolored.

Working Example 2, refer to Fig. 2: First, technology such as silk screening, water transfer printing, gold stamping or spraying is used to perform printing and coloring on the side surface of a sole base material 1, and a printed ink layer 3 with various colored patterns is formed. Then, flocking technology is used to make a flocked layer 2 on the outer surface of the sole. The flocked layer is a transparent flocked layer, and the printed ink layer 3 on the lower layer can be seen through it.

Working Example 3, refer to Fig. 3: First, a flocked layer 2 is made on the outer surface of a sole base material 1, then printing and coloring are performed on top of the flocked layer 2 to form a printed ink layer 4, and the patterns are clearer and brighter.

Working Example 4, refer to Fig. 4: Based on the above working examples (taking Working Example 2 as an example), flocking is performed on the side surface of the sole following patterns such as flowers and plants, animals, letters and characters, trademarks, etc. to form partial re-flocked layers 5. The partial re-flocked layers can be single-layer or multiple-layer, and when multiple-layer, the sense of three-dimensionality is more enhanced, and the effect is better.

Working Example 5, refer to Fig. 5: Flocking technology is used to partially make flocked layers 5 on the side surface of a sole base material 1. The flocked layers can be patterns such as flowers and plants, animals, letters and characters, trademarks, etc., and the partial flocking enhances the decorativeness.

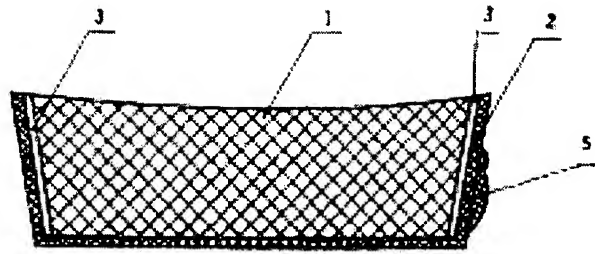


Figure 4

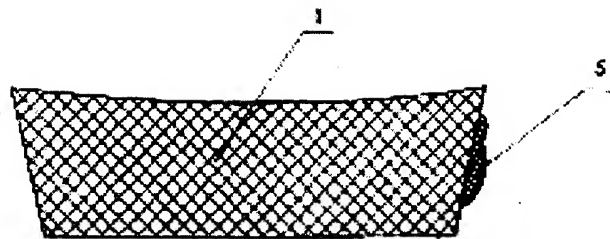


Figure 5

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[12]实用新型专利说明书

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权利要求书1页 说明书2页 附图页数2页

[54]实用新型名称 复合多形植绒鞋底

[57]摘要

本实用新型涉及一种表面经加工处理的鞋底。其特征为：采用植绒技术等工艺，在鞋底基材(1)的外表面或侧面局部上植制绒层(2)。还可以在植绒之前或之后印制彩色花纹图案，形成复合多形植绒鞋底。具有外表美观、脚感舒适、耐磨防滑、耐老化、耐洗涤、不褪色等特点。配上相应的鞋帮，可制成各式皮鞋、凉鞋、拖鞋等。



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权 利 要 求 书

- 1、一种复合多形植绒鞋底，其特征为：在鞋底基材(1)的外表面或侧面局部，有一植绒层(2)。
- 2、根据权利要求1所述的鞋底，其特征为：在所述鞋底基材(1)的侧表面与植绒层(2)之间，有一彩印油墨层(3)，植绒层(2)为透明植绒层。
- 3、根据权利要求1所述的鞋底，其特征为：在所述鞋底侧表面的植绒层(2)上，有一彩印油墨层(4)。
- 4、根据权利要求1或2所述的鞋底，其特征为：在所述鞋底侧面的植绒层(2)上，局部有单层或多层再植绒层(5)。
- 5、根据权利要求3所述的鞋底，其特征为：在所述鞋底侧表面的彩印油墨层(4)上，局部有单层或多层再植绒层(5)。

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## 说明书

### 复合多形植绒鞋底

本实用新型涉及一种表面经加工处理的鞋底。

目前，国内外鞋底的表面加工处理一般是用化工油墨喷色。但化工油墨对人体有害，且污染环境，经化工油墨喷色的鞋底，存在易褪色、易燃烧、外表面粗糙等缺点。

本实用新型的目的在于克服上述鞋底存在的缺点，提供一种其表面无毒、不褪色、不易燃烧、耐老化的鞋底。

本实用新型目的的实现，是采用植绒技术等工艺在鞋底基材的外表面或侧面局部上，植制绒层。植绒层可以是各种颜色或多彩色。

本实用新型，可以先在鞋底侧面经过丝印、热转印、水转印、黄金、喷色等印花着色处理后，再在鞋底的外表面上植制绒层。也可以先植绒后再在植绒层上进行印花着色。还可以在鞋底的侧表面的植绒层上再局部植绒，如花草、动物、文字、商标等图案。局部再植绒可以是单层或多层，多层时呈立体图案。还可以在植绒层上热烫上各种花纹图案，增强立体感。

植绒工艺能使原来外表面粗糙的鞋底得到改良，印花着色和植绒复合工艺适合于各种基材的鞋底，可制成各种多形鞋底。植绒鞋底或鞋底侧面局部植绒的鞋底，供鞋厂配上相应的鞋帮，可制成各式皮鞋、革鞋、凉鞋、拖鞋等。拖鞋鞋底，可连同鞋底的上表面也植上绒层。

本实用新型，具有如下特点：外表美观、立体感强、脚感舒适、耐磨防滑，植绒层不燃烧、耐老化、耐洗涤、不褪色等。

下面实施例结合附图对本实用新型的结构作进一步描述。

图1~图5分别为实施例1~5之复合多形植绒鞋底的结构剖视图。

图中，1、鞋底基材 2、植绒层 3、4、印刷油墨层 5、植绒层。

实施例1、参照图1，采用植绒技术在鞋底基材1的外表面上制作植绒层2，植绒层可以为各种颜色或多彩色。

实施例2、参照图2，首先采用丝印、热转印、水转印、黄金或喷色等



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技术，在鞋底基材1的侧表面上进行印花着色，形成各种色彩图案的印刷油墨层3，然后再采用植绒技术在鞋底的外表面上制作植绒层2，植绒层为透明植绒层，底层的印刷油墨层3可透视出来。

实施例3、参照图3，先在鞋底基材1的外表面上制作植绒层2，再在植绒层2上进行彩印着色，形成印刷油墨层4，其图案更加清晰和鲜艳。

实施例4、参照图4，在以上实施例(以实施例2为例)的基础上，在鞋底侧表面上，按照花草、动物、文字、商标等图案植绒，形成局部再植绒层5，局部再植绒层可以为单层或多层，多层时，立体感更强，效果更好。

实施例5、参照图5，采用植绒技术在鞋底基材1的侧面上局部制作植绒层5，植绒层可以为各种颜色的花草、动物、文字、商标等图案，局部植绒增强其装饰性。

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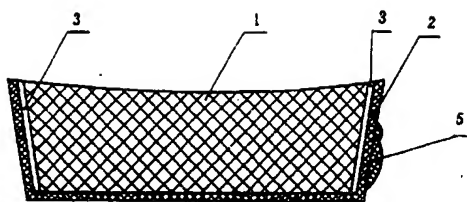


图 4

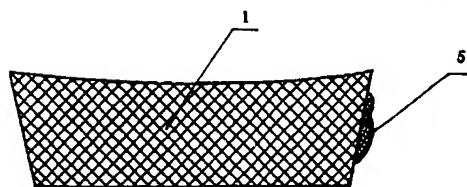


图 5